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Prüfungsantrag gemäß § 44 PatG ist gestellt.

Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen

(54) Bezeichnung: Humane Nukleinsäuresequenzen aus Bronchialkarzinomen

(57) Zusammenfassung: Die Erfindung betrifft neue humane Nukleinsäuresequenzen aus Bronchialkarzinomen, hierdurch codierte Proteine bzw. Peptide sowie deren Verwendungen im Zusammenhang mit der Diagnose und/oder Behandlung von Bronchialkrebs.

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New nucleic acid, and derived proteins, useful for diagnosis of bronchial cancer and in screening for therapeutic and diagnostic agents

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Patent Family (2 patents, 33 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
DE 10316701	A1	20041104	DE 10316701	A	20030409	200478 B
EP 1498424	A2	20050119	EP 200490140	A	20040408	200506 E

Priority Applications (no., kind, date): DE 10316701 A 20030409

Patent Details

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EP 1498424	A2	DE			

Regional Designated States,Original: AL AT BE BG CH CY CZ DE DK EE ES FI
FR GB GR HR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

Alerting Abstract DE A1

NOVELTY - Isolated nucleic acid (I) associated with bronchial cancer comprising 489 defined sequences given in the specification, is new.

DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- 1.protein or peptide (II), preferably isolated, that contains a sequence encoded by (I) or consists of, or includes, any of 489 amino acid sequences, reproduced; and
- 2.methods for diagnosis or treatment of bronchial cancer that uses an agent (A) that binds to, or inhibits, (I) or (II).

ACTIVITY - Cytostatic.

No biological data given.

MECHANISM OF ACTION - Inhibiting expression or activity of tumor-associated proteins.

USE - (I), and proteins/peptides (II) encoded by them are used:

- 1.for detecting bronchial cancer or determining the risk of developing it; and
- 2.to screen for specific binding partners (A) of (I) and (II), where (A) are potentially useful as agents for treating or diagnosing bronchial cancer (claimed).

(I) and (II) can also be used for prognosis, detection of metastases and for secondary treatment (of tumors that have been stabilized or are no longer detectable).

ADVANTAGE - Detecting abnormal expression of (I) provides early diagnosis of bronchial cancers.

Technology Focus

BIOLOGY - Preferred Process: To detect bronchial cancer (or the risk of developing it) either a bronchial tissue sample is tested for differential

transcription of (I) or differential expression of (II), or (I) or (II) is detected in blood, serum or sputum. Particularly the method uses a detection substance (DS), preferably containing a reporter group, and binding of DS to (I) or (II) is determined (semi)quantitatively. Exemplified methods of detection are quantitative real-time PCR and reaction with labeled antibodies, -in vivo - or on tissue sections. To screen for (A), a test compound, or mixture, is contacted with (I) or (II) in a binding assay, and any compounds that bind are selected, optionally after deconvolution. For diagnosis of bronchial cancer, a labeled (A) is applied to test tissue, -in vivo - or -in vitro -, and any binding of (A) determined. The sample is assessed as containing tumor cells if a defined minimum value (over expression in tissue) or maximum value (underexpression) is found. Alternatively, serum or sputum samples are tested similarly.

Preferred Materials: Binding/inhibitory agents are:

1. antisense oligonucleotides, short interfering RNA or ribozymes directed against (I);
2. organic compounds of molecular weight below 5000, best 300, aptamers or (monoclonal) antibodies (Ab), preferably human or humanized, directed against (II);
3. anti-idiotypic non-human (monoclonal) antibodies directed against Ab; or
4. derivatives of (A)-(C) that contain a reporter group, cellular toxin, immunostimulant and/or radioisotope.

Isolation: RNA was isolated from bronchial tumor tissue and healthy tissue from the same patient; converted to cDNA and this used for transcription of biotinylated RNA. This was tested for hybridization to a gene chip and any genes showing differential expression between the two types of tissue were identified. Some (I)/(II) are associated with adenocarcinoma; others with lamellar epithelial carcinoma and others with both types of tumor.

Title Terms /Index Terms/Additional Words: NEW; NUCLEIC; ACID; DERIVATIVE; PROTEIN; USEFUL; DIAGNOSE; BRONCHIAL; CANCER; SCREEN; THERAPEUTIC; AGENT

Class Codes

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File Segment: CPI

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Chemical Indexing

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****Humane Nukleinsäuresequenzen aus Bronchialkarzinomen****

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C07K-14/435(B) C12Q-1/68(B)

Original Abstract: Die Erfindung betrifft neue humane Nukleinsäuresequenzen aus Bronchialkarzinomen, hierdurch codierte Proteine bzw. Peptide sowie deren Verwendungen im Zusammenhang mit der Diagnose und/oder Behandlung von Bronchialkrebs.

Claim:

1. Nukleinsäure, insbesondere isolierte Nukleinsäure, enthaltend oder bestehend aus einer Nukleinsäuresequenz gemäss einer der Sequenzen Seq.-ID 1 bis 489.

EPO

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****Humane Nukleinsäuresequenzen aus Bronchialkarzinomen**

Human nucleic acid sequences from lung tumours

Acides nucleiques derives du cancer bronchopulmonaire**

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Current IPC: C07K-14/47(A) C07K-16/18(B) C12Q-1/68(B) G01N-33/574(B)

Original Abstract: Die Erfindung betrifft neue humane Nukleinsäuresequenzen

aus Bronchialkarzinomen, hierdurch codierte Proteine bzw. Peptide sowie deren Verwendungen im Zusammenhang mit der Diagnose und/oder Behandlung von Bronchialkrebs.

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